

REMARKS

In the present application, claims 1-13 and 15-40 are pending. Claims 1-29 and 31-40 are rejected. Claim 30 is objected to. Claim 14 has been cancelled. Claim 30 is amended herein. No new matter has been added. As a result of this amendment, claims 1-13, and 15-40 are believed to be in condition for allowance.

Claim Objections

The Examiner objected to claim 14 for failing to further limit the subject matter of a previous claim. Claim 14 has been cancelled. Examiner's grounds for objection are therefore rendered moot.

Claim Rejections – 35 USC § 103

The Examiner rejected claims 1-3, 5-29, and 31-40 as being unpatentable over Pinhanez (US 6,431,711) in view of Connelly et al. (US 2003/0202156 A1). The Examiner asserts that Pinhanez teaches "At least one mount (216) for mounting a projection unit (900), the projection unit comprises of [sic] at least a projector (211) for projecting a distorted image wherein the at least one mount includes a mechanism for providing rotational movement (215), which combined with projecting a pre-distorted image produces a substantially undistorted image on a surface". The Examiner then correctly asserts that "Pinhanez does not teach the mount is coupled to a mechanism for providing translational movement for adjusting the position of the projection unit." The Examiner further asserts that "Connelly teaches ... a mechanism for providing translational movement for adjusting the position of a projection unit mounted on it. ... Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to mount the projector of Pinhanez on the mechanism of Connelley, [sic] which allows translational movement."

Applicants respectfully respond that the Examiner is incorrect in his characterization of the teachings of Pinhanez. As a result, a combination of the teachings of Pinhanez and Connelly, which Applicants in no way suggest or consider proper, would not disclose the elements of claim 1. Furthermore, Pinhanez teaches away from a combination with art providing for the lateral translation of the projection unit. Lastly, combining the teachings of Pinhanez and Connelly,

which is neither suggested nor considered proper, would render Pinhanez unsatisfactory for its intended purpose.

Claim 1 recites:

A positioning system comprising,

at least one mount for mounting a projection unit, the projection unit comprised of at least a projector for projecting a distorted image; wherein the at least one mount is coupled to a mechanism **for providing translational movement** and rotational movement for adjusting one of a position and an orientation **of the projection unit** to produce from the distorted image a substantially undistorted image on a surface.
(emphasis added)

Applicants respectfully submit that Pinhanez does not teach a “mount for mounting a projection unit” wherein the mount “is coupled to a mechanism for providing translational movement and rotational movement for adjusting one of a position and an orientation of the projection unit”. The Examiner is in error when stating that Pinhanez teaches “At least one mount (216) for mounting a projection unit (900), the projection unit comprises of [sic] at least a projector (211) for projecting a distorted image wherein the at least one mount includes a mechanism for providing rotational movement (215).” As is clear from Fig. 2 of Pinhanez and the accompanying descriptive text at col. 4, line 66 – col. 5, line 1, “Connection system 216 is optional but may be used to mount video projector 211 and redirection device 215 to a wall or other suitable location.” It is therefore clear that the “mount” (connection (216)) does not include “a mechanism for providing rotational movement (215)” of the projection unit as the Examiner asserts.

The Examiner admits that Pinhanez “does not teach the mount is coupled to a mechanism for providing translational movement for adjusting the position of the projector unit.” While taking no position on the Examiner’s characterizations of Connelly, the Examiner does not assert that Connelly teaches a mount providing rotational movement of the projection unit. As a result, combining the teachings of Pinhanez and Connelly, such a combination neither suggested nor deemed proper by the Applicants, fails to disclose the mount recited in claim 1. Applicants therefore traverse the Examiner’s grounds for rejection with respect to claim 1. Claim 1 is

therefore in condition for allowance.

Applicants further maintain that Pinhanez, far from teaching or suggesting combination with the teachings of Connelly which, as has been noted, Applicants in no way suggest or consider proper, in fact teaches away from such a combination. In the disclosed embodiments, Pinhanez teaches the use of a stationary display projector. At col. 6 lines 36-41, Pinhanez states "FIG. 2 contains a surface database 229 that contains multiple sets of parameters 231 through 232. Each set of surface parameters 231 through 232 contains parameters for one particular destination area, and each set of surface parameters 231 through 232 is used to ensure that an image is properly displayed at one destination area." The sets of parameters are calibrated and stored for projection from a known, stationary position, specifically, the fixed location of the projector. As such, the teachings of Pinhanez are inapplicable to a scenario wherein a projector unit, including a display projector, is laterally translated. As a result, Pinhanez teaches away from combining its teachings with art providing for the lateral translation of a projector unit as is claimed.

There is no suggestion or motivation to make a proposed modification to a prior art reference if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose,. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984) Combining Pinhanez with art so as to enable translational movement of a projector unit would render the teaching of Pinhanez inoperable owing to the stationary calibration of the system that assumes projection from a single, stationary point.

For this additional reason, Applicants likewise traverse the Examiner's grounds for rejection with regard to claim 1. Claim 1 is therefore in condition for allowance. As all of claims 2-13 and 15-23 depend upon claim 1, they are likewise in condition for allowance.

With respect to claim 24, the Examiner erroneously states that "Pinhanez teaches ... the method of using the projection system above ... in view of Connelly this would obviously also include transnational [sic] movement if necessary."

Claim 24 recites, in part:

moving the at least one projector by operating a mechanism comprising the at least one

projector mounted on a moveable portion of the mechanism, wherein the mechanism is adapted for **providing translational movement and rotational movement of the at least one projector** to provide the substantially undistorted image upon the surface at the location.

As noted above, the combination of Pinhanez with art to render the projector unit laterally translatable would render the teachings of Pinhanez inoperable. As such, Pinhanez does not teach or suggest combination with the teachings of Connelly, a combination which the Applicants neither suggest nor deem proper. As a result, Applicants traverse the rejections with regards to claim 24. As all of claims 25-29 depend upon claim 24, claims 25-29 are likewise considered to be in condition for allowance. However, with specific reference to claim 27, Applicants are compelled to note that the Examiner is incorrect when asserting that "The purpose of Connelly's rail positioning system/mechanism is to avoid occlusion". Connelly makes no mention or use of the word "occlusion" nor does Connelly discuss in alternative terms a desire or capability to reduce the occurrence of occlusion. Connelly's "purpose" with regards to occlusion, as evidenced by the disclosure, is known to none other than Connelly.

The Examiner rejects claims 31-40 for reasons best summarized by the assertion "See above". Claim 31 states, in relevant part, "repeating the loading, moving, adjusting, recording, associating and storing for a plurality of positions of the at least one projector." As noted above, any combination of art with Pinhanez to enable a "plurality of positions of the at least one projector" would render the teachings of Pinhanez inoperable. Applicants therefore traverse the Examiner's grounds for rejection with respect to claim 31.

Claim 32 states, in relevant part, "positioning the at least one projector at a location by referring to the setting layout information" As noted above, Pinhanez teaches projection of an image from a single, unmovable location. Therefore, positioning the projector at more than one location would render the teachings of Pinhanez inoperable. Applicants therefore traverse the Examiner's grounds for rejection with respect to claim 32.

Claim 33 states, in relevant part, "providing a positioning system comprising at least one mount adapted for mounting a projection unit", and "loading area layout information into a positioning controller for operating the positioning system". As noted above, Pinhanez teaches projection of an image from a single, unmovable location. For the reasons recited above, there is

no motivation to combine the teachings of Pinhanez to provide for a positioning system for the projection unit. Applicants therefore traverse the Examiner's grounds for rejection with respect to claim 33.

Claim 34 states, in relevant part, "positioning the projection unit to provide the substantially undistorted image upon a surface at the location". For the reasons discussed above relating to the inoperability of a combination of Pinhanez and Connelly, Applicants traverse the Examiner's grounds for rejection with respect to claim 34.

Claim 35 states, in relevant part, "wherein the mounting means is coupled to positioning means for providing translational movement and rotational movement of the projection means". For the reasons discussed above relating to the inoperability of a combination of Pinhanez and Connelly, as well as the lack of a teaching directed to rotational movement of the projection means, Applicants traverse the Examiner's grounds for rejection with respect to claim 35. As claim 36 depends upon claim 35, claim 36 is likewise in condition for allowance.

Claim 37 states, in relevant part, "the at least one projector mounted to at least one mount that is coupled to a mechanism providing translational movement and rotational movement for positioning the at least one projector". For the reasons discussed above relating to the inoperability of a combination of Pinhanez and Connelly, as well as the lack of a teaching directed to rotational movement of the projection means, Applicants traverse the Examiner's grounds for rejection with respect to claim 37. As claims 38-39 depend upon claim 37, claims 38-39 are likewise in condition for allowance.

Claim 40 states, in relevant part, "a positioning apparatus for positioning a projection unit in three-dimensional space". For the reasons discussed above relating to the inoperability of a combination of Pinhanez and Connelly, Applicants traverse the Examiner's grounds for rejection with respect to claim 40.

Allowable Subject Matter

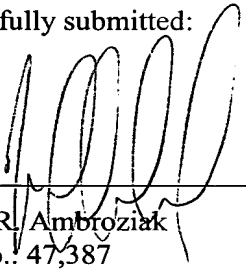
The Examiner objected to claim 30 as being dependent upon a rejected base claim, but noted that it would be allowable if rewritten to include the base claim and any intervening claims. Claim 30 has been so amended and is therefore in condition for allowance.

An earnest and thorough attempt has been made by the undersigned to resolve the outstanding

issues in this case and place same in condition for allowance. If the Examiner has any questions or feels that a telephone or personal interview would be helpful in resolving any outstanding issues which remain in this application after consideration of this amendment, the Examiner is courteously invited to telephone the undersigned and the same would be gratefully appreciated.

It is submitted that the claims herein patentably define over the art relied on by the Examiner and early allowance of same is courteously solicited.

Respectfully submitted:



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12 Apr 95

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